

shorter. Of the two species mentioned, this latter is distinguished by a complete absence of the umbilical fissure. This species I collected in the suburbs of Paysandú (Republic of Uruguay), where it is not common. My particular friend, H. von Ihering, notable macalologist, honored me by dedicating to me this species, as a mark of esteem and in attention to my activities in the study and investigations of the malacological fauna of Uruguay.

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ON THE DESIGNATION OF GENOTYPES

BY W. A. LINDHOLM

In NAUTILUS, XLI, p. 21. Dr. H. Burrington Baker proposes for designation of genotypes valid according to the International Code of Zoölogical Nomenclature the following terms: autotype, monotype, tautotype, apotype and lectotype. All these terms, with exception of tautotype, were proposed already in 1912 by N. Banks and A. N. Caudell¹ for designation of *type-specimens*, and are hitherto admitted in practical use for the supposed aim in systematic biology. It is therefore not convenient the *same* terms to use for definition of *genotypes*.

Some time ago the writer² proposed for designation of the various categories of genotypes, valid and invalid, mentioned in the International Rules of Zoölogical Nomenclature, a number of terms. An earlier attempt with the

¹ Nathan Banks and A. N. Caudell, The Entomological Code, a Code of Nomenclature for Use in Entomology, Washington, 1912.

² W. A. Lindholm, Vorschläge zur genaueren Bezeichnung der Genotypen (Zoologischer Anzeiger LXIII, 1925, p. 161-5); Eine weitere Kategorie von Genotypen (op. cit. LXIV, 1925, p. 245-7); Berichtigungen zu der Uebersetzung der § 30 der Internationalen Nomenclaturregeln (op. cit. LXXIII, Heft 578, 1927).

same purpose, made by Ch. Schuchert and S. S. Buckman,³ was not based on and therefore not adaptable to the Rules.

For the four categories of genotypes, enumerated by Dr. H. B. Baker loc. cit. the corresponding terms of the writer are as follows:

1. Type by original designation—autogenotype.
2. Type by original fixation—monogenotype, tautogenotype.
3. Type fixation through substitution—apogenotype.
4. Type by first valid subsequent designation—idiogenotype.

The designations of the other (invalid) categories of genotypes mentioned in the Rules may be found in the cited papers of the writer.

It may here be pointed out, moreover, that the term "genotype", as largely used by the systematists in zoölogy and botany, was introduced in 1897 by Ch. Schuchert⁴ and has therefore precedence and priority against the same term of quite other significance, which was proposed in genetics by W. Johannsen⁵ in 1903.

³ Ch. Schuchert and S. S. Buckman, *The Nomenclature of Types in Natural History* (*Annals and Mag. of Nat. Hist.*, 7th series, vol. 16, No. 91, 1905, p. 102-104).

⁴ Ch. Schuchert, *What is a type in natural history?* in "Science", April 23, 1897, pp. 636-40 and Ch. Schuchert in *Bull. U. S. National Museum*, No. 53, Part I, 1905, p. 15 (rectified definition). Here at first Schuchert on p. 12 proposed also the term *Lectotype* for designation of type specimens.

⁵ W. Johannsen, *Ueber Erblichkeit in Populationen und in reinen Linien*. Jena 1903.